

REMARKS

1.) Claim Amendments

In order to expedite prosecution, the Applicants have cancelled claims 83 and 86-97, without waiver or disclaimer to present those claims in a continuing application. Clarifying amendments have been made to claims 50 and 67, without the introduction of new subject matter, and claims 99-101 have been added. Accordingly, claims 50, 53-57, 67, 70-81 and 99-101 are now pending.

2.) Claim Rejections – 35 U.S.C. §103(a)

The Examiner has now rejected claims 50, 53-57, 67, 70-81, 83 and 86-97 as being unpatentable over Sharma (U.S. Patent No. 7,406,314 B2) in view of Wallentin, et al. (U.S. Patent No. 6,594,238 B1). Claims 83 and 86-97 have been cancelled and, therefore, the rejections thereof are moot. The Applicants traverse the remaining claim rejections.

Before considering the merits of the Examiner's new basis of rejection, it will be helpful to review the prosecution history:

- 1.) The Examiner first rejected claim 50 as anticipated by Wallentin in an Office Action dated March 4, 2009.
- 2.) In responding to that basis of rejection on June 4, 2009, the Applicants amended claim 50 to include the limitations of original claims 51 and 52, which the Examiner had also rejected as anticipated by Wallentin, and submitted arguments to distinguish claim 50 over the teachings thereof.
- 3.) The Examiner maintained the rejection of claim 50, as anticipated by Wallentin, in a Final Office Action dated September 14, 2009.
- 4.) The Applicants filed a response to the Final Office Action on November 16, 2009, wherein the limitations of claim 50 were restructured without adding any new substantive matter, and arguments were again submitted to traverse the rejection thereof in view of Wallentin.
- 5.) The Examiner then issued an Advisory Action, dated December 4, 2009, which indicated that the claim amendments would not be entered and that the

amendments "changed the scope of all the claims which require a further search/consideration."

- 6.) The Applicants then filed a Request for Continued Examination on January 14, 2010, based on the amendments and arguments previously submitted in response to the Final Office Action.

The Examiner has now rejected all of the claims as obvious over Sharma *in view of Wallentin*. For the reasons that follow, Sharma fails to cure the deficiencies, as previously identified by Applicants, in the teachings of Wallentin.

Claim 50 recites:

50. A method in a User Equipment (UE) for initiating a data transfer from the UE in a Universal Mobile Telecommunications System (UMTS) terrestrial radio access network (UTRAN), wherein the UTRAN comprises at least one Radio Network Controller (RNC) connectable to the UE that is capable of being in the states UTRAN Registration Area Paging Channel (URA PCH), Cell Paging Channel (CELL PCH) or Cell Dynamic Host Configuration (CELL DCH), said method comprising the steps of:

introducing delay reducing information into a data transfer initiating message by the UE, wherein the data transfer initiating message is an uplink cell update message transmitted by the UE and wherein the delay reducing information comprises information indicating whether the traffic volume of the data to be transmitted is above a pre-configured threshold;

transmitting the data transfer initiating message by the UE; and,

receiving a message from the RNC comprising information for transferring the UE from the URA PCH or the CELL PCH state directly to the CELL DCH state. (emphasis added)

The Applicants' invention is directed to initiating a data transfer by a User Equipment (UE; e.g., a "mobile station") in a UMTS radio access network, and is characterized by a data transfer initiating message including delay reducing information. In particular, the data transfer initiating message is an uplink cell update message transmitted by the UE, wherein the delay reducing information comprises information indicating whether the traffic volume of the data to be transmitted by the UE is above a pre-configured threshold. A Radio Network Controller (RNC) that receives the data transfer initiating

message then sends a message that is received by the UE; the message includes information for transferring the UE from a URA PCH or CELL PCH state directly to a CELL DCH state. Neither Sharma nor Wallentin disclose that combination of elements and functionality.

As noted *supra*, the Examiner previously rejected claim 50 as anticipated by Wallentin. In the present office action, the Examiner adds the teachings of Sharma and rejects that claim as obvious in view of the combination of references. The Examiner, however, acknowledges that Sharma fails to teach any of the emphasized claim limitations (page 3, line 11, et seq.); the Examiner has relied on the teachings of Sharma solely with respect to what is stated in the preamble of claim 50. With respect to the actual steps in the claimed method, the Examiner again points to the teachings of Wallentin. As noted in prior office action responses, Wallentin does teach a method of adapting a connection state in a mobile communication system wherein a decision to change state is based on a value of traffic volume. The solution taught by Wallentin, however, apparently assumes that knowledge of the traffic volume is available in the network node that makes the decision to change state; there does not appear to be any teaching in Wallentin of how such information is acquired by the network node. According to Applicants' claimed invention, it is the User Equipment that determines whether traffic volume of the data to be transmitted exceeds a pre-configured threshold, which is indicated in the data transfer initiation message transmitted by the User Equipment.

The Applicants invention solves the problem of how to get traffic volume information to a Radio Network Controller (RNC) without having to explicitly signal the actual traffic volume. Instead of sending the actual traffic volume to the RNC, the User Equipment only signals to the RNC, in the data transfer initiating message, whether the traffic volume is above a pre-configured threshold. Signaling only whether the traffic volume exceeds a predetermined threshold can be done, for example, using a single bit of information and, therefore, requires less bandwidth than explicitly signaling the traffic volume. Wallentin fails to teach or suggest that mechanism for indicating whether the traffic volume of the data to be transmitted is above a pre-configured threshold.

The present Office Action again fails to specifically address the Applicants' arguments, as presented *supra*, as to why Wallentin fails to teach the emphasized claim elements. Rather, the Examiner has merely again referenced the same portions of Wallentin which he previously read onto those claim elements. As previously noted, however, the Examiner has yet to address the fact that, according to Applicants' claimed invention, a data transfer initiating message is transmitted by a UE to an RNC, wherein the message includes delay reducing information comprising information that indicates whether the traffic volume of the data to be transmitted is above a pre-configured threshold. By including that information indicating whether the traffic volume is above the pre-configured threshold, an RNC can then, as provided in claims 99-101, make a decision as to whether to instruct the UE to transfer directly from the URA PCH or the CELL PCH state directly to the CELL DCH state; the CELL DCH is a dedicated channel that can provide a higher data rate to better meet the needs of the UE when the traffic volume of the data to be transmitted is above a desired threshold.

Referring to Figure 8 and column 8, lines 26-60, of Wallentin, it can be seen that a connection state selector (CSS) is provided in each RNC and MS. Each RNC and MS also include measurement units, and connection queues 71 and 81 are provided in both the RNC and the mobile station which store current data packets to be sent over the connection. In particular, it is noted that Wallentin teaches:

"When a connection state selector determines that a connection state change is necessary, it sends a signal to a corresponding controller, i.e., the RNC controller 75 or the mobile station controller 82. The respective controller handles the signaling over the radio interface in order to make the connection state change." (emphasis added)

In other words, measurements are done in each of the RNC and MS, and connection state changes are made in each, independent of the other. Thus, in contrast to the claimed invention, Wallentin does not teach a measurement done in the UE and decision to change state in the RNC as a function of information transmitted from the UE to the RNC.

Wallentin *does* describe a solution where a decision to change state is based on the value of certain traffic volume. Wallentin, *however*, appears to assume that the

traffic volume is available in the node that makes the decision to change state. Wallentin, however, does not describe *how* such information is provided to the node that makes the decision. According to Applicants' claimed invention, a traffic volume measurement is done in the UE, while the decision to change state is done in the RNC; see claims 99-101. This is a clear distinction of the claimed invention over the teachings of Wallentin. Furthermore, the problem the Applicants' invention solves, and not addressed by the teachings of Wallentin, is how to get such information to the RNC – noting that there can be limited or no available bandwidth in the signaling message to carry such traffic volume measurement information. The Applicants' invention solves the problem by having the UE signal only whether the traffic volume exceeds a predetermined threshold, rather than communicating the actual traffic volume. Transmitting only whether the traffic volume exceeds a threshold is more efficient than transmitting the actual traffic volume measurement information to the RNC; i.e., the Applicants' invention allows for a much smaller message. Thus, Wallentin fails to teach the claimed combination of functions and, therefore, the Examiner has not established a *prima facie* case of obviousness of claim 50 in view of Sharma and Wallentin.

Whereas independent claims 67 and 99 recite limitations analogous to those of claim 50, they are also not obvious over Sharma and Wallentin. Furthermore, whereas claims 53-57 and 100 are dependent from claim 50 and claims 70-81 and 101 are dependent from claim 67, and include the limitations of those base claims, those claims are also not obvious in view of Sharma and Wallentin.

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CONCLUSION

In view of the foregoing amendments and remarks, the Applicants believe all of the claims currently pending in the Application to be in a condition for allowance. The Applicants, therefore, respectfully request that the Examiner withdraw all rejections and issue a Notice of Allowance for claims 50, 53-57, 67, 70-81 and 99-101.

The Applicants request a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,

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